

**CLAIMS:**

1. Method of producing and displaying an image of a volume from a multi-dimensional object data set, characterized in that:

a surface associated with the volume is identified,

an initial position on the identified surface is selected,

5 at least one depth associated with the identified surface is selected,

a reformat slice is produced from the object data set at the selected depth along the normal to the identified surface at the selected initial position.

2. A method as in claim 1, characterized in that:

10 at least one further position on the identified surface is selected and a reformat slice is produced at said selected depth along the normal to the identified surface at said further selected position.

3. A method as in claim 1 or 2, characterized in that:

15 reformat slices are produced perpendicular to the normal to the identified surface at the selected position, and

the depth associated with the identified surface is selected by selecting one of those reformat slices.

20 4. A method as in claim 1 or 2, characterized in that:

a transverse view is created, which includes the identified surface and the selected point, and

the depth associated with the identified surface is selected from this transverse view.

25

5. A method as in claim 1 or 2, characterized in that:

the depth associated with the identified surface is selected from a priori information.

6. A method as in claim 1 or 2, characterized in that:

the reformat slice is perpendicular to the normal to the identified surface at the selected point on the identified surface, at the point on the reformat slice where the reformat slice is intersected by said normal to the identified surface.

5

7. A method as in claim 1, in which reformat slices are produced along the normal to the identified surface at the selected position, characterized in that:

the reformat slice is produced from a stack of reformat slices produced perpendicular to the normal to the selected point on the surface.

10

8. A computer program characterized in that:

the computer program contains instructions to enable a surface associated with the volume to be selected, instructions to enable an initial point on the identified surface to be selected, instructions to enable at least one depth to be selected and instructions to enable a reformat slice to be produced from the object data set at the selected depth along the normal to the identified surface at the selected position.

9. A workstation configured for the purposes of producing, displaying and using images and containing instructions for the production and display of an image of a volume from a multi-dimensional object data set, characterized in that:

the workstation further includes instructions to enable a surface associated with the volume to be selected, instructions to enable an initial point on the identified surface to be selected, instructions to enable at least one depth to be selected and instructions to enable a reformat slice to be produced from the object data set at the selected depth along the normal to the identified surface at the selected position.